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# North American Wildland Plants, Third Edition

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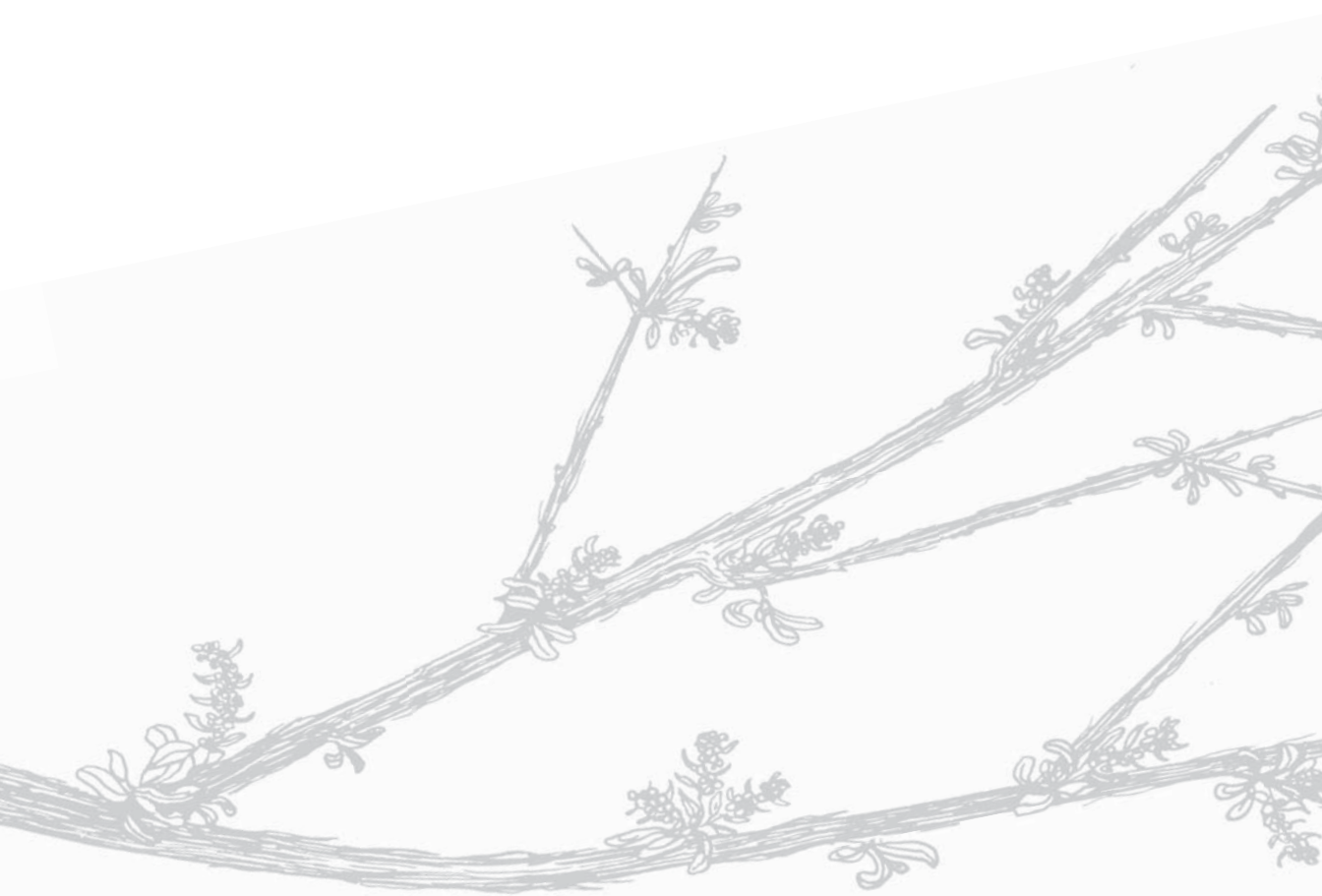
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NORTH AMERICAN WILDLAND PLANTS

*Third Edition*

*James Stubbendieck, Stephan L. Hatch,  
Neal M. Bryan, and Cheryl D. Dunn*

# *North American*



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# *Wildland Plants*

THIRD EDITION

A FIELD GUIDE



Illustrated by Neal M. Bryan,  
Angie Fox, Kelly L. Rhodes Hays,  
Bellamy Parks Jansen, and Debra Meier

Maps by Kathleen Lonergan-Orr  
and Neal M. Bryan

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Set in Arno Pro by L. Auten.

*To students striving to understand the complex nature of the plant world.*



# Contents

Acknowledgments	xv
Introduction	1
Wildland Plants	5

## GRASSES

### FAMILY

### POACEAE

TRIBE	SCIENTIFIC NAME	
ANDROPOGONEAE	<i>Andropogon gerardi</i>	31
	<i>Andropogon virginicus</i>	33
	<i>Bothriochloa laguroides</i>	35
	<i>Heteropogon contortus</i>	37
	<i>Schizachyrium scoparium</i>	39
	<i>Sorghastrum nutans</i>	41
	<i>Tripsacum dactyloides</i>	43
ARISTIDEAE	<i>Aristida oligantha</i>	45
	<i>Aristida purpurea</i>	47
AVENEAE	<i>Agrostis stolonifera</i>	49
	<i>Avena barbata</i>	51
	<i>Avena fatua</i>	53
	<i>Avenula hookeri</i>	55
	<i>Calamagrostis canadensis</i>	57
	<i>Calamagrostis rubescens</i>	59
	<i>Deschampsia cespitosa</i>	61
	<i>Koeleria macrantha</i>	63
	<i>Phalaris arundinacea</i>	65
	<i>Phleum alpinum</i>	67
	<i>Phleum pratense</i>	69
	<i>Trisetum spicatum</i>	71



BROMEAE	<i>Bromus carinatus</i>	73
	<i>Bromus diandrus</i>	75
	<i>Bromus hordeaceus</i>	77
	<i>Bromus inermis</i>	79
	<i>Bromus tectorum</i>	81
CYNODONTEAE	<i>Bouteloua curtipendula</i>	83
	<i>Bouteloua dactyloides</i>	85
	<i>Bouteloua eriopoda</i>	87
	<i>Bouteloua gracilis</i>	89
	<i>Bouteloua hirsuta</i>	91
	<i>Bouteloua repens</i>	93
	<i>Chloris cucullata</i>	95
	<i>Cynodon dactylon</i>	97
	<i>Hilaria belangeri</i>	99
	<i>Hilaria jamesii</i>	101
	<i>Hilaria mutica</i>	103
	<i>Schedonnardus paniculatus</i>	105
	<i>Spartina gracilis</i>	107
	<i>Spartina pectinata</i>	109
DANTHONIEAE	<i>Danthonia californica</i>	111
	<i>Danthonia intermedia</i>	113
	<i>Danthonia parryi</i>	115
ERAGROSTEAE	<i>Blepharoneuron tricholepis</i>	117
	<i>Calamovilfa longifolia</i>	119
	<i>Distichlis spicata</i>	121
	<i>Eragrostis curvula</i>	123
	<i>Eragrostis trichodes</i>	125
	<i>Leptochloa dubia</i>	127
	<i>Muhlenbergia montana</i>	129
	<i>Muhlenbergia porteri</i>	131
	<i>Muhlenbergia torreyi</i>	133
	<i>Redfieldia flexuosa</i>	135
	<i>Scleropogon brevifolius</i>	137
	<i>Sporobolus airoides</i>	139
	<i>Sporobolus compositus</i>	141
	<i>Sporobolus cryptandrus</i>	143
MELICEAE	<i>Melica bulbosa</i>	145

PANICEAE	<i>Digitaria californica</i>	147
	<i>Panicum hallii</i>	149
	<i>Panicum obtusum</i>	151
	<i>Panicum virgatum</i>	153
	<i>Paspalum distichum</i>	155
	<i>Pennisetum ciliare</i>	157
	<i>Setaria leucopila</i>	159
POEAE	<i>Dactylis glomerata</i>	161
	<i>Festuca campestris</i>	163
	<i>Festuca idahoensis</i>	165
	<i>Poa fendleriana</i>	167
	<i>Poa pratensis</i>	169
	<i>Poa secunda</i>	171
	<i>Vulpia octoflora</i>	173
STIPEAE	<i>Achnatherum hymenoides</i>	175
	<i>Achnatherum nelsonii</i>	177
	<i>Hesperostipa comata</i>	179
	<i>Nassella leucotricha</i>	181
	<i>Nassella pulchra</i>	183
TRITICEAE	<i>Agropyron cristatum</i>	185
	<i>Elymus canadensis</i>	187
	<i>Elymus elymoides</i>	189
	<i>Elymus trachycaulus</i>	191
	<i>Hordeum jubatum</i>	193
	<i>Hordeum pusillum</i>	195
	<i>Leymus cinereus</i>	197
	<i>Pascopyrum smithii</i>	199
	<i>Pseudoroegneria spicata</i>	201
	<i>Taeniatherum caput-medusae</i>	203
	<i>Thinopyrum intermedium</i>	205

## GRASSLIKE PLANTS

FAMILY	SCIENTIFIC NAME	
CYPERACEAE	<i>Carex filifolia</i>	209
	<i>Carex geyeri</i>	211
	<i>Carex nebrascensis</i>	213
	<i>Carex utriculata</i>	215
	<i>Schoenoplectus acutus</i>	217
JUNCACEAE	<i>Juncus balticus</i>	219

## FORBS AND WOODY PLANTS

FAMILY	SCIENTIFIC NAME	
ANACARDIACEAE	<i>Rhus aromatica</i>	223
APIACEAE	<i>Conium maculatum</i>	225
ASTERACEAE		
TRIBE	SCIENTIFIC NAME	
ANTHEMIDEAE	<i>Achillea millefolium</i>	227
	<i>Artemisia cana</i>	229
	<i>Artemisia filifolia</i>	231
	<i>Artemisia frigida</i>	233
	<i>Artemisia ludoviciana</i>	235
	<i>Artemisia nova</i>	237
	<i>Artemisia spinescens</i>	239
	<i>Artemisia tridentata</i>	241
ASTEREAE	<i>Amphiachyris dracunculoides</i>	243
	<i>Chrysothamnus viscidiflorus</i>	245
	<i>Ericameria nauseosa</i>	247
	<i>Grindelia squarrosa</i>	249
	<i>Gutierrezia sarothrae</i>	251
	<i>Heterotheca villosa</i>	253
	<i>Solidago missouriensis</i>	255
CICHORIEAE	<i>Agoseris glauca</i>	257
	<i>Crepis acuminata</i>	259
	<i>Taraxacum officinale</i>	261

EUPATORIEAE	<i>Liatris punctata</i>	263
HELIANTHEAE	<i>Ambrosia deltoidea</i>	265
	<i>Ambrosia dumosa</i>	267
	<i>Ambrosia psilostachya</i>	269
	<i>Baileya multiradiata</i>	271
	<i>Balsamorhiza sagittata</i>	273
	<i>Flourensia cernua</i>	275
	<i>Hymenoxys hoopesii</i>	277
	<i>Hymenoxys odorata</i>	279
	<i>Ratibida columnifera</i>	281
	<i>Wyethia amplexicaulis</i>	283
	<i>Wyethia mollis</i>	285
SENECIONEAE	<i>Senecio flaccidus</i>	287
	<i>Senecio serra</i>	289
	<i>Tetradymia canescens</i>	291
FAMILY	SCIENTIFIC NAME	
BETULACEAE	<i>Alnus incana</i>	293
BRASSICACEAE	<i>Descurainia pinnata</i>	295
	<i>Stanleya pinnata</i>	297
CANNABACEAE	<i>Celtis pallida</i>	299
CAPRIFOLIACEAE	<i>Symphoricarpos albus</i>	301
	<i>Symphoricarpos occidentalis</i>	303
CHENOPODIACEAE	<i>Atriplex canescens</i>	305
	<i>Atriplex confertifolia</i>	307
	<i>Atriplex gardneri</i>	309
	<i>Grayia spinosa</i>	311
	<i>Halogeton glomeratus</i>	313
	<i>Kochia americana</i>	315
	<i>Kochia scoparia</i>	317
	<i>Krascheninnikovia lanata</i>	319
	<i>Salsola tragus</i>	321
	<i>Sarcobatus vermiculatus</i>	323
CLUSIACEAE	<i>Hypericum perforatum</i>	325

CORNACEAE	<i>Cornus sericea</i>	327
CUPRESSACEAE	<i>Juniperus monosperma</i>	329
	<i>Juniperus scopulorum</i>	331
DENNSTAEDTIACEAE	<i>Pteridium aquilinum</i>	333
ELAEAGNACEAE	<i>Shepherdia canadensis</i>	335
EPHEDRACEAE	<i>Ephedra trifurca</i>	337
ERICACEAE	<i>Arctostaphylos pungens</i>	339
	<i>Arctostaphylos uva-ursi</i>	341
FABACEAE	<i>Acacia berlandieri</i>	343
	<i>Acacia farnesiana</i>	345
	<i>Acacia greggii</i>	347
	<i>Acacia rigidula</i>	349
	<i>Amorpha canescens</i>	351
	<i>Astragalus mollissimus</i>	353
	<i>Dalea purpurea</i>	355
	<i>Lupinus caudatus</i>	357
	<i>Medicago polymorpha</i>	359
	<i>Oxytropis lambertii</i>	361
	<i>Prosopis glandulosa</i>	363
	<i>Psoraleidium tenuiflorum</i>	365
FAGACEAE	<i>Quercus gambelii</i>	367
	<i>Quercus stellata</i>	369
GERANIACEAE	<i>Erodium botrys</i>	371
	<i>Erodium cicutarium</i>	373
	<i>Geranium richardsonii</i>	375
GROSSULARIACEAE	<i>Ribes cereum</i>	377
KRAMERIACEAE	<i>Krameria erecta</i>	379
MALVACEAE	<i>Sphaeralcea coccinea</i>	381
ONAGRACEAE	<i>Chamaenerion angustifolium</i>	383

PINACEAE	<i>Pinus edulis</i>	385
	<i>Pinus ponderosa</i>	387
PLANTAGINACEAE	<i>Penstemon glaber</i>	389
	<i>Plantago patagonica</i>	391
RANUNCULACEAE	<i>Delphinium bicolor</i>	393
	<i>Delphinium occidentale</i>	395
RHAMNACEAE	<i>Ceanothus cuneatus</i>	397
	<i>Ceanothus fendleri</i>	399
	<i>Ceanothus integerrimus</i>	401
	<i>Ceanothus velutinus</i>	403
ROSACEAE	<i>Adenostoma fasciculatum</i>	405
	<i>Amelanchier alnifolia</i>	407
	<i>Cercocarpus ledifolius</i>	409
	<i>Cercocarpus montanus</i>	411
	<i>Coleogyne ramosissima</i>	413
	<i>Dasiphora fruticosa</i>	415
	<i>Fallugia paradoxa</i>	417
	<i>Prunus virginiana</i>	419
	<i>Purshia stansburyana</i>	421
	<i>Purshia tridentata</i>	423
	<i>Rosa woodsii</i>	425
SALICACEAE	<i>Populus tremuloides</i>	427
	<i>Salix bebbiana</i>	429
	<i>Salix exigua</i>	431
ZYGOPHYLLACEAE	<i>Larrea tridentata</i>	433
Glossary		435
Abbreviations for Nomenclature Authorities		461
Checklist of Wildland Plants		473
Selected References		479
Index		493



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## NORTH AMERICAN WILDLAND PLANTS



# Introduction

A comprehensive reference containing the important characteristics of the most important wildland plants of North America is critical for ecologists, range managers, land managers, and other natural resource professionals. In addition, university students and range plant identification teams needed a single, primary resource for learning about important wildland plant species. *North American Range Plants* was developed to meet these needs and was first published in 1981. Subsequent editions (1982, 1986, 1992, 1997) included changes in nomenclature, refinement of distributions, additional information on each of the species, and new illustrations. The illustrations were prepared to highlight general and specific characteristics to aid identification of the featured range plants. The fifth edition (1997) reflected changing attitudes toward riparian areas and wetlands. Reflecting this increased concern and interest, about 10 percent of the species included in this book occur on these sites. *North American Wildland Plants* (2003, 2011) included many nomenclatural changes, and the illustrations were labeled to accentuate specific characteristics. The title change reflected the importance of plants across ecosystems and the multiple uses of the plant resources within ecosystems. This edition contains additional refinements in the nomenclature, distribution, illustrations, and descriptions of plants. This reference will help both individuals with limited botanical knowledge and natural resource professionals to identify wildland plants.

The two hundred species in this book were selected because of their abundance, desirability, or noxious properties; in short, they are important wildland species. The list of plant species was developed over the course of nearly sixty years by faculty from the universities and colleges with rangeland management and ecology programs and by coaches of range plant identification teams. The formal list is now the Master Plant List for the International Range Plant Identification Contest sponsored by the Society for Range Management (6901 South Pierce Street, Littleton CO 80128; [www.rangelands.org](http://www.rangelands.org)).

Plant species descriptions in this book include characteristics for their identification, a labeled illustration of a typical plant (with enlarged plant parts), and a general distribution map for North America. Each species description includes nomenclature; life span; origin; season of growth; inflorescence, flower or spikelet or other reproductive parts; vegetative parts; and growth characteristics. Forage values for wildlife and livestock are estimated. Brief notes are included on habitat; livestock losses; and historical, food, and medicinal uses. Information on historical, food, and medicinal uses was gathered from numerous sources and is presented as a point of interest and to broaden readers' appre-

ciation of these plants. It is strongly emphasized that these plant species should not be used for these purposes.

Grasses (POACEAE family) are described first and are aligned by tribe, genus, and specific epithet in alphabetical order by rank. Grasslike plants (CYPERACEAE and JUNCACEAE families) are next. All other families follow in alphabetical order by rank for family, genus, and specific epithet with the exception of members of the ASTERACEAE family, which are aligned as the POACEAE family.

The grass (POACEAE) and composite (ASTERACEAE) families are treated by tribe to help the reader relate to smaller groups within these large, complex families. Recognition of species within tribes builds a concept of tribal characteristics. When an unknown species of either family is encountered, knowledge of tribal alignments below family may reduce the time required for making an identification using a diagnostic key.

Classification generally follows Tropicos ([www.tropicos.org](http://www.tropicos.org)), sponsored by the Missouri Botanical Garden. Tropicos is the world's largest botanical database.

Numerous authoritative floristic treatments from the wildland areas of North America were consulted for species names and authorities. Selected synonyms, noting other names for the same species, are included on the illustration page for each species to help clarify the species concept used in this text. The synonyms will help in finding additional information in other floristic treatments.

Common and alternative common names are given for the plants, but they may not include the common name used in a particular area. Common names were restricted to two words, sometimes resulting in long and cumbersome words. Common names used in Mexico are listed for the appropriate taxa and may exceed two words.

The origin of each species is given as native or introduced. Origins of introduced taxa are given parenthetically. Many species are known to be introduced, while others are thought to have been introduced. *Poa pratensis* L. is an example of a species that is listed as introduced but may be both native and introduced to North America.

Season of growth is listed as cool, warm, or evergreen. Cool-season plants complete most of their growth in the autumn, winter, and spring. Warm-season plants grow most in the summer when temperatures are the highest. The evergreen plants retain their ability to grow whenever climatic conditions are suitable. A summary of this information may be found in the Checklist of Wildland Plants included in this book.

Plant characteristics for each species are separated into categories to help in making comparisons between species. Bold type is used in this edition to emphasize important characteristics that separate species. These characteristics are intended to be useful to students preparing to compete in the International Range Plant Identification Contest and to amateur botanists. Conservative characteristics, those that are not greatly influenced by the environment, should be the basis for identification. These may include floral, spikelet, leaf, and inflorescence type but may vary with the species. Pubescence, ligule lengths, and awn lengths are highly variable characteristics, and primary importance should not be placed on these when identifying grasses. Presence or absence of rhizomes is another

variable characteristic that is somewhat dependent upon moisture, other features of the habitat, and techniques used by the collector.

Forage values of the plants discussed in this book are relative values that vary with the type of animal utilizing the particular plant species. Values are determined on the basis of palatability, nutrient content, and the amount of forage produced by the plant species. These values may vary with the climatic conditions, the part of North America where the plant is growing, when the forage is consumed, associated plant species, and the age and class of each animal species utilizing the forage.

Losses due to poisonous plants, one of the major problems facing the livestock industry in some regions, are included in these plant descriptions. Annual losses on wildlands amount to hundreds of millions of dollars, with the effects of poisonous plants varying from slightly reduced rate of gain to deformities or death of the animal. Losses that are easy to document, such as death, are not as economically important as the losses wherein growth rate or milk production is reduced. The brief mention of livestock losses in this book include the animals affected and the type of poison, commonly referred to as the poisonous principle, contained in the plant species.

This book includes a glossary, list of nomenclature authorities, list of selected references, and a checklist of the species. This supplementary information will give the student, professional natural resource manager, and anyone else interested in plants a more complete knowledge of plants and a starting place in the literature to seek additional information. The index is comprehensive, including all scientific and common names used in the text.

The information contained in *North American Wildland Plants* is by no means complete. The authors have opted for brevity with the expectation that this book will be a starting point for those interested in wildland plant identification. Plant taxonomists and extension personnel in each locality can provide additional information on plant species of interest.